§112 Rejection

The Office Action rejects claims 1-10 and 23-29 under 35 U.S.C. §112, first paragraph. Specifically, the Office Action asserts that the referred to claims fail to comply with the written description requirement. The Office Action argues that the specification does not contain support for the limitation that the fibers are "substantially uniformly" dispersed in the elastomer.

The Examiner's assertion that the present application is silent as to the newly added claim language "substantially uniformly" only affirms Applicants' unfortunate conclusion that the Examiner has overlooked one of the many advantages afforded by Applicants' claimed combination of features. Applicants have developed, *inter alia*, a way to avert aggregation of carbon nanofibers and instead achieve homogenous and uniform dispersal thereof. Accordingly, the language "substantially uniform" dispersal clarifies the claims in this regard.

Contrary to the Office Action's assertion, support for "substantially uniform" dispersal or homogenous dispersal, can be found *in passim* in Applicants' specification. The following exemplary citations indicate that the solution to the problem of carbon nanofiber aggregation was in the hands of Applicants at the time of filing and accordingly disclosed: page 2, paragraph 4, page 4, paragraph 1, page 15, paragraph 2, page 16, paragraph 1, page 17, paragraph 3 - page 18, page 19, paragraph 1. For example, the specification expressly states at page 2, paragraph 4 that "the carbon fiber composite material of the invention can have a structure that the carbon nanofiber is homogenously dispersed into the elastomer." As such, the added claim language "substantially uniformly" dispersed is well-supported in Applicants' disclosure as filed.

Accordingly, withdrawal of the rejection is respectfully requested.

The Claims Define Allowable Subject Matter

The Office Action rejects claims 1-10 and 23-29 under 35 U.S.C. §103(a) as obvious over Fisher et al. (U.S. Patent No. 6,203,814) in view of Brennan et al. (U.S. Patent No. 5,844,523). The rejection is respectfully traversed.

The Office Action asserts, *inter alia*, that Fisher teaches all of the claimed combination of features except elastomers being crosslinked or uncrosslinked. However, Fisher fails to teach the claimed spin-spin relaxation time of the network components as measured by the Hahn-echo method using pulsed NMR techniques. The Office Action asserts that since the same materials are employed and the same results are obtained, it is reasonable to presume that the materials of Fisher would have the claimed spin-spin relaxation time. However, it is impossible, based on the Fisher disclosure, to arrive at the claimed substantial uniform dispersal of carbon nanofibers as a solution to the problem of nanofibril aggregation based on blinded uncertain use of similar materials. Moreover, the results are simply not the same. Specifically, nothing in the Fisher disclosure teaches or suggest homogenous dispersal, or uniform dispersal. The Office Action erroneously states that Fisher teaches at columns 7, lines 10-18 that carbon fibers are easily dispersed in the elastomer composition. Applicants respectfully submit that dispersal, as defined by common dictionaries, means only to drive off or scatter in different directions. This term does not connote the homogeneous dispersal presently claimed and further clarified by the recently amended language "substantially uniform" dispersal. Indeed, the Fisher reference only indicates that certain polymer systems bond directly to fibrils making "the fibrils *easier* to disperse with improved adherence." This language does not, in any way, place the solution of substantially uniform dispersal in the hands of the public so as to anticipate or make obvious Applicants' present disclosure. Thus, the Office Action's indication that "the same results are obtained" is erroneous.

Moreover, and by the same logic, the Fisher reference fails to teach not only the claimed spin-spin relaxation time, but also substantially uniform dispersal of carbon nanofiber in elastomer as presently claimed.

Fisher, either alone or in combination with Brennan, fails to teach or suggest the presently claimed combination of features. In accordance with the foregoing, an in addition to the submitted test data enclosed herewith, Applicants respectfully request withdrawal of the rejection.

Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

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JAO:EDM:RAC/eks

Attachment:
Test Data
English translation of Japanese Priority Application No. 2003-309932

Date: May 3, 2007

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